

Please cancel claims ~~24-25~~.

1. (AMENDED) A method for establishing security in an ad hoc communication network, the ad hoc communication network comprising a set of communication nodes, at least two nodes of the set of communication nodes having a mutual trust relation and comprising a trust group, the trust relations being created with public keys, and at least one additional node the at least one additional node being a candidate node for joining the trust group within the ad hoc communication network, the nodes having authority to delegate trust to nodes of the set of communication nodes they trust, the method comprising the steps of:

identifying a node of the set of communication nodes within the trust group having a trust relation with the candidate node, the node having the trust relation with the candidate node being an X-node; and

distributing trust relations between all members in the trust group and the candidate node by means of the X-node.

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2. (AMENDED) The method of claim 1, comprising, before the identifying step, the the candidate node sending a message comprising a public key of the candidate node to all nodes of the set of communication nodes within the ad hoc communication network.

3. (AMENDED) The method of claim 1, wherein the ad hoc communication network comprises a single trust group and a single candidate node, and wherein the distributing step comprises the X-node sending a signed message comprising a list of nodes that the X-node trusts within the ad hoc communication network and all corresponding public keys to the candidate node.

4. (AMENDED) The method according to claim 1, wherein the distributing step comprises the X-node signing the candidate node's public key.

5. (AMENDED) The method according to claim 4, wherein the distributing step comprises the X-node sending a message comprising the candidate node's signed public key to the nodes within the trust group.

6. (AMENDED) The method according to claim 2, wherein the ad hoc communication network comprises a set of nodes comprising several trust groups, each of the set of nodes being candidates for joining all trust groups within the ad hoc communication network that the set of nodes are not already a member of, the method comprising, after receiving the messages, each node of the set of nodes creating a list of candidate nodes that a given node of the set of nodes trusts and corresponding public keys.

7. (AMENDED) The method according to claim 6, further comprising deciding one node within the ad hoc communication network to act as a server node.

8. (AMENDED) The method according to claim 7, further comprising the server node receiving, from each other node within the ad hoc communication network, a message comprising a respective public key, a respective list of candidate nodes that the respective node trusts, and corresponding public keys.

9. (AMENDED) The method according to claim 8, further comprising the server node classifying the at least one candidate node as being a server-trusted node or as being a server-untrusted node, depending on whether the server node trusts the at least one candidate node or not.

10. (AMENDED) The method according to claim 9, wherein the identifying step further comprises the server node identifying at least one Y-node required for distributing trust relations between the server node and at least one server-untrusted node.

11. (AMENDED) The method according to claim 10, wherein said distributing step further comprises sending, by the server node, of a request to the identified at least one Y-node to distribute said trust relations between the server node and the server-untrusted nodes.

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12. (AMENDED) The method according to claim 11, wherein said distributing step further comprises obtaining, by the server node, of said requested trust relations.

13. (AMENDED) The method according to claim 12, wherein the step of obtaining the trust relations further comprises:

signing, by the Y-node, of the public key of the server node for each server-untrusted node that the Y-node has a trust relation with; and

forwarding, by the Y-node, of said signed public key to the server-untrusted node.

14. (AMENDED) The method according to claim 12, wherein the step of obtaining the trust relations comprises:

signing, by the Y-node, of the public key of the server-untrusted node for each server-untrusted node that the Y-node has a trust relation with; and

forwarding, by the Y-node, of said signed public key to the server node.

15. (AMENDED) The method according to claim 12, comprising the further step of, after obtaining said trust relation, reclassifying, by the server node, the server-untrusted node with the obtained trust relation as being a server-trusted node.

16. (AMENDED) The method according to claim 12, comprising the further step of sending, by the server node, of a signed message comprising the server node's trusted public keys belonging to trusted candidate nodes within the ad hoc communication network.

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17. (AMENDED) An ad hoc communication network comprising:
a set of communication nodes,
each node of said set of communication nodes comprising a receiver and a computer, the computer comprising a processor and a memory, each node being interconnected with communication links, at least two of the nodes having a mutual trust relation and comprising a trust group, the trust relations being created with public keys,
at least one additional node of the set of communication nodes being a candidate node for joining at least one trust group within the ad hoc network,
the at least one candidate node having means for requesting if any of the nodes within the trust group have a trust relation with the candidate node, and
each node being authorised to and having means for distributing trust relations between the trust group and the candidate node that the node trusts.

18. (AMENDED) The ad hoc communication network according to claim 17, wherein said each node comprises means for creating a list of candidate nodes that each node trusts and corresponding public keys of each node to be stored in the memory.

19. (AMENDED) The ad hoc communication network according to claim 17, wherein one node of the set of communication nodes within the ad hoc network is operable as a server node capable of administrate distribution of trust relations.

20. (AMENDED) The ad hoc communication network according to claim 19, wherein the server node is operable to classify the at least one candidate node as being a server-trusted node or as being a server-untrusted node, depending on whether the server node trusts the at least one candidate node or not.

21. (AMENDED) The ad hoc communication network according to claim 20, wherein the server node comprises means for identifying at least one Y-node required for distributing trust relations between the server node and server-untrusted nodes.

22. (AMENDED) The ad hoc communication network according to claim 21 , wherein the server node comprises means for sending to each of said at least one Y-node:
a request as to which of the server-untrusted nodes the Y-node has a trust relation with; and
a request for distributing trust relations between the server node and the requested server-untrusted nodes.

23. (AMENDED) The ad hoc communication network according to claim 20, wherein the server node comprises means for distributing obtained trust relations to the nodes within the ad hoc communication network.